



# MSIAC M&S Newsletter

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If you would like to submit an article to be highlighted in the MSIAC M&S Newsletter, please forward the article (along with its source data and URL, if available) to the MSIAC Help Desk no later than 15 workdays prior to the publication of the next Newsletter. Normally, the Newsletter is published on/about the first of each month. Potential articles as well as questions or comments on the Newsletter can be emailed to [msiachelpdesk@msiac.dmsi.mil](mailto:msiachelpdesk@msiac.dmsi.mil).

The MSIAC also publishes the quarterly MSIAC Journal On-line. If you would like to see the current issue of the MSIAC Journal On-line visit: <http://www.msiac.dmsi.mil/journal>. If you would like to submit an article for the Journal On-line, please email your paper or article to [msiachelpdesk@msiac.dmsi.mil](mailto:msiachelpdesk@msiac.dmsi.mil) at least 45 days prior to the next publication date. The next Journal On-line is scheduled to be published 1 September 2005.

## UPCOMING EVENTS

22-25 August 2005  
[NDIA's Joint ADL Co-Lab \(JADL\) Implementation Fest 2005](#)  
Orlando, FL

23-25 August 2005  
[MSSOC \(Modeling and Simulation Staff Officer Course\)](#)  
Alexandria, VA

18-23 September 2005  
[2005 Fall Simulation Interoperability Workshop \(Fall SIW\)](#)  
Orlando, FL

26-29 September 2005  
[ITEA International Symposium](#)  
Albuquerque, New Mexico

27-29 September 2005  
[MSSOC Tactical Training Group Pacific](#)  
San Diego, CA

## **2005 FALL SIMULATION INTEROPERABILITY WORKSHOP (FALL SIW)**

The SIW is a semiannual event encompassing a broad range of model and simulation issues, applications and communities. The Workshop consists of a series of forums and special sessions addressing interoperability issues and proposed solutions; tutorials on state-of-the-art methodologies, tools and techniques; and exhibits displaying the latest technological advances.

The Fall SIW focus is: *Use of Game Technology in Military Modeling and Simulation.*

Defense departments worldwide are turning to game technologies such as scenario-based game engines and on-line massively multi-player role-playing game servers as one way of providing low-cost, on demand, deployable tactical training to the warfighter. In addition, game and entertainment technologies such as crowd behavior modeling are being embedded into traditional military trainers. While defense departments value and mandate standards in military programs, does the game industry

have the commitment, incentive, and experience to apply simulation standards to ensure validity of training and to enable communications, commonality, and reuse between different vendors' games?

Games and game technologies are proliferating in military training. Are they reusable, interoperable, and maintainable? If not, should they be? Must the military community create its game technologies from a blank sheet? Or can we devise economically efficient methods to reuse commercial games without falling victim to common problems such as how to gain access to proprietary code and how to interpret the game results for analytic purposes? For more information visit: <http://www.sisostds.org/>

#### **FOUR WINNERS SELECTED FOR MODELING AND SIMULATION AWARDS**

(28 July 2005) – The Department of Defense announced that four winners have been selected for the seventh annual Department of Defense Modeling and Simulation (M&S) awards.

Awards are presented annually to Department of Defense (DoD) teams or individuals for their outstanding achievements during the calendar year in the development or application of models and simulations within the Department. Four awards are presented each year by DoD -- an award in each of the specific M&S functional areas of Training, Analysis and Acquisition and one for cross-functional efforts that involve or impact two or more of the functional areas. For a complete list of the winners visit: <http://www.defenselink.mil/releases/2005/nr20050728-4242.html>

#### **ACTD TO SIMPLIFY THE WAY COMBATANT COMMANDERS, FORCE PROVIDERS SEE JOINT FORCE PROJECTION**

(NORFOLK, VA – 7 July 2005) - Combatant Commanders and Joint Task Force (JTF) Commanders will soon have a new tool in their arsenal to help them manage the Joint

Force Projection (JFP) process, enabling them to better track capabilities they need, units that can fulfill their requests for support, and when and where their requested capabilities arrive.

The Joint Force Projection (JFP) Advanced Concept Technology Demonstration (ACTD) shows promise in improving and simplifying warfighters' and force providers' JFP efforts, according to Doug Kelsey, deputy operational manager for the JFP ACTD.

The ACTD is being developed by U.S. Joint Forces Command (USJFCOM), the Defense Information Systems Agency, Defense Advanced Research Projects Agency, and the Deputy Undersecretary of Defense for Advanced Systems and Concepts with the support of all the Services and two other unified commands taking a major role - U.S. Transportation Command and U.S. Central Command.

"What we're trying to do is refine the deployment system to provide the JTF commander timely, accurate and comprehensive force projection information," said Kelsey. "It gives the commander a better understanding of sourcing, projection and integration in the joint operations arena."

"It also provides him a higher degree of certainty that required forces, equipment and sustainment arrives to him where needed, on time and prepared for employment," added Kelsey. "From the force provider on our end, through the ACTD, we receive a better understanding of the capabilities and types of forces being requested."

This new ACTD provides a single integrated force projection picture that links operators at service, joint and agency levels using real-time Web-based, network centric information systems, said Kelsey. For complete article visit:

<http://www.jfcom.mil/newslink/storyarchive/2005/pa070705.htm>

## **WARFIGHTER SIMULATION MAKES MAJOR ADVANCE TO SUPPORT MODULAR FORCES**

(ORLANDO, FL – 7 July 2005) - The Warfighter Simulation (WARSIM) program - the Army's most advanced constructive training simulation - is demonstrating major performance gains and new capabilities on lower cost hardware to support a wide spectrum of command and staff training.

Using the latest AMD (Opteron) processors and the Linux operating system, WARSIM has doubled performance and is now able to support the new modular forces being established by the U.S. Army.

"This advance will enable WARSIM to scale to very large and dense scenarios such as urban operations through the use of commodity hardware," explained Dr. Michael Macedonia of the U.S. Army Program Executive Office for Simulation, Training and Instrumentation (PEO STRI). "We expect additional dramatic gains in performance later this year as we port WARSIM to larger systems."

Macedonia said that he sees the potential for running a division-level exercise off a single server which would be 30 to 50 percent cheaper than the current computer configuration. "By this fall, we expect to have WARSIM running on a single host computer which will dramatically cut the cost of exercises and time for planning," he said.

"WARSIM is a key enabling program for training the Army's current and future force commanders and staffs. It is a critical component in the Army Constructive Training Federation (ACTF) that will help bring about a second revolution in military training," stated Dr. Jim Blake, Program Executive Officer at STRI. "WARSIM will train forces in all aspects of command and control. ACTF models will provide full training functionality for leader and battle staff computer-based simulation training throughout the Army, Joint, Interagency, Intergovernmental and Multinational spectra."

WARSIM's architecture provides a flexibility to interface to other live, virtual and constructive training simulations simultaneously, while employing their organic Command, Control, Communications, Computer, and Intelligence (C4I) systems and equipment. The program is designed to support U.S. Army commander and staff training for brigade through echelons above Corps. Army units world wide can train in their command posts using organic C4I equipment, minimizing simulation-related overhead. For complete article visit: <http://www.peostri.army.mil/PAO/pressrelease/WARSIM2.jsp>

## **THE BATTLE COMMAND, SIMULATION, AND EXPERIMENTATION DIRECTORATE (DAMB-SB) AND THE SOCIETY FOR MODELING AND SIMULATION INTERNATIONAL (SCS) ESTABLISH THE JOURNAL OF DEFENSE MODELING AND SIMULATION: APPLICATIONS, METHODOLOGY, TECHNOLOGY**

*The Journal of Defense Modeling and Simulation: Applications, Methodology, Technology* will be a quarterly refereed archival journal devoted to advancing the practice, science, and art of modeling and simulation as it relates to the military and defense. The primary focus of the journal is to document, in a rigorous manner, technical lessons derived from practical experience. The journal will also publish work related to the advancement of defense systems modeling and simulation technology, methodology, and theory. The journal will cover all areas of the military/defense mission, maintaining a focus on the practical side of systems simulation vice pure theoretical applications. For more information please visit: <http://www.amso.army.mil/>

## **DEPARTMENT OF ARMY'S SIMULATION OPERATIONS FUNCTIONAL AREA 57 (FA 57)**

What is an FA 57?

An Army Simulation Operations (FA 57) officer is first an operator, and then a

simulationist. As the SME on Battle Command and Simulations, the FA 57 officer applies models and simulations to create the environment that prepare soldiers, leaders and units for war. FA 57 officers plan and employ a mix of live, virtual and constructive simulations in support of training and military operations. FA 57 officers integrate modeling and simulation with battle command systems. Additionally, FA 57 officers assist in the development of current and future simulations and battle command systems. The FA 57 officer serves as the Commander's SME for linking embedded systems, LVC and Battle Command Systems to create the environments for leader, staff, soldier and unit training. During military operations the FA 57 officer serves as the Commander's SME on mission planning and mission rehearsal ensuring that the collaborative tools, embedded simulations and Battle Command Systems, are all integrated, with the reach network. For more information visit: <http://www.fa-57.army.mil/>

#### **DARPA COMPLETES PHASE I EXPERIMENTS OF LEADING EDGE PREDICTIVE TOOL FOR COMBAT DECISION MAKING**

The Defense Advanced Research Projects Agency (DARPA) has completed Phase I experimentation of the development program of a software tool designed to provide predictive analysis of probable enemy actions. The tool, called RAID (Real-time Adversarial Intelligence and Decision-making) is currently focused on urban operations against irregular combatants, but is envisioned to have utility in a variety of other combat environments.

There have been a wide variety of analytical tools and techniques developed over the last ten years that deal with the military decision making process, but since Operation Iraqi Freedom in 2003 U.S. military leaders have been calling for the development of specific techniques and tools that address the twin challenges of adversarial and deception reasoning.

Decision support tools currently in use perform, among other things, the staff planning process, on par with, and

sometimes better than, a human staff. However, they are process tools that do not perform any sort of adversarial reasoning. They do not take into account emotional or cognitive aspects of the battle, they are unable to look ahead from the point of view of an enemy who may have insight into friendly courses of action, and they do not explicitly reason about physical deception activities and concealment.

Adversarial reasoning is primarily the generation of computational solutions to problems of determining the state, intent, and resulting actions of an adversary. To accomplish this the RAID tool contains two major components, an adversarial reasoning module, and a deception reasoning module. The adversarial module observes battle situation changes and generates friendly and enemy action predictions. The deception module continually observes the battlefield predictions made by the adversarial module and infers possible concealed enemy forces and their movements, incorrectly identified enemy assets and decoys, and enemy actions designed to mislead friendly forces. The resulting output of RAID is in the form of predictions of enemy actions presented in a user-friendly, rapidly comprehensible format. These predictions are delivered to the user, such as a company commander, via computer displays in combat vehicles or on personal digital assistant (PDA)-like devices for dismounted personnel.

For additional information about the RAID tool and the program it is being developed under, visit:  
<http://dtsn.darpa.mil/ixo/programdetail.asp?progid=57>.

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